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General Motors Corporation
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EXAMINER

HOLLIDAY, JAIME MICHELE

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10801309	3/16/2004	ITALIA ET AL.	GP-304136 (2760/144)

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EXAMINER

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2617	20090128
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Commissioner for Patents**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-5 and 7-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Howe (US 6,876,855 B1).

Consider claim 1, Howe clearly shows and discloses a system for optimizing the routing of a call originated from a land-based terminal 43 to a wireless mobile terminal 47, reading on the claimed "wireless mobile communication device," utilizing the interaction between a server controlled Internet protocol network and the home location register (HLR) 53 of the mobile terminal. In response to a call request by the server, the HLR identifies the visited location register (VLR) 57 in contact with the mobile terminal and obtains a temporary local directory number (TLDN) of the local serving switch in contact with a mobile data unit connected to the mobile terminal. The server uses the TLDN to reach a data unit on the network, which is used to place a local call over the public switched telephone network (PSTN) to the serving switch, reading on the claimed, "method for assigning a mobile dialing number (MDN) to a wireless mobile communication device (MCD) for providing local call access to the MCD from a base address for the MCD," (abstract), the method comprising: searching the internal database of the HLR to determine the VLR last in contact with the mobile terminal, reading on the claimed "selecting a wireless rate center encompassing the base address and having an MDN providing local call access to the MCD from the base address for the MCD," (column 3 lines 37-39); and sending a routing request from the HLR to the VLR, and the VLR determining that a call is deliverable and allocating a TLDN from a pool of numbers whose geographic base is the serving switch 63 in communication with the mobile terminal, reading on the claimed "assigning the MDN providing local calling access to the MCD from the base address for the MCD, in the selected wireless rate center encompassing the base address, to the MCD," (column 4 lines 28-33).

Consider claim 2, and as applied to claim 1 above, Howe further discloses the home mobile switch 19 passes the TLDN on to a second public switch telephone network/inter-exchange carrier switches (PSTN/IXC) 37 for delivery to the serving switch associated with the VLR where the mobile unit is located. The VLR associates the TLDN allocated with the mobile data unit and passes the information back to the serving switch, reading on the claimed "activating the assigned MDN," (column 3 lines 9-15).

Consider claim 3, and as applied to claim 2 above, Howe further discloses the TLDN is returned to the HLR in to response to the routing request, then is forwarded to the network server as a response to a location request for the mobile terminal, reading on the claimed "configuring the MCD for operation with the assigned MDN," (column 4 lines 32-35).

Consider claim 4, and as applied to claim 1 above, Howe further discloses the HLR searches its internal database for the VLR in contact with the mobile terminal, which then identifies the switch in communication with the mobile terminal that will connect the incoming call to the data unit associated with the mobile terminal, reading on the claimed "compiling a database defining geographic boundaries of a plurality of wireless rate centers", and selecting the wireless rate center of claim 1 from the database," (column 3 lines

37-39, column 4 lines 29-33, 65-67). The VLR, reading on the claimed “wireless rate center,” stored in the database determines the serving switch which is the geographic location of the mobile terminal.

Consider claim 5, and as applied to claim 4 above, Howe further discloses that the network server chooses an appropriate data unit 70 from the pool that is local to the physical location of the mobile terminal, by using the NPA-NXX number format of the TLDN and comparing it with the phone number connection between the data unit and its connection to the PSTN/IXC, reading on the claimed “converting the base address to a geographic location and selecting the wireless rate center from those wireless rate centers in the database having geographic boundaries encompassing the geographic location of the base address,” (column 4 lines 52-57).

Consider claim 7, and as applied to claim 1 above, Howe further discloses the HLR searches its internal database to determine the VLR last in contact with the mobile terminal, reading on the claimed “selecting the wireless rate center prior to contacting a wireless service provider,” (column 3 lines 37-39). The HLR contacts the VLR and asks for the identity of the serving switch last in contact with the mobile terminal, reading on the claimed “transmitting a designation of the selected wireless rate center to a wireless service provider for assignment of the MDN by the wireless service provider,” (column 3 lines 39-41). The HLR selects the VLR before contacting the VLR which functions as the current “service provider” of the mobile terminal.

Consider claim 8, and as applied to claim 7 above, Howe further discloses that the VLR allocates a TLDN from a pool of numbers whose geographic base is the serving switch in communication with the mobile terminal. The TLDN is returned to the HLR that forwards it to the network server, reading on the claimed “assigning the MDN and transmitting the assigned MDN to an entity other than the wireless service provider for configuring the MCD for operation with the assigned MDN,” (column 4 lines 30-35).

Consider claim 9, and as applied to claim 7 above, Howe further discloses that the serving switch sending a routing request to the VLR which the associates the TLDN with the data unit 51 connected to the mobile terminal and passes its mobile identification number (MIN) in response to the routing request from the HLR, reading on the claimed “transmitting a serial number of the MCD to the wireless service provider together with the designation of the selected wireless rate center,” (column 4 lines 62-65).

Consider claim 10, and as applied to claim 9 above, Howe further discloses that in order to identify the mobile terminal, the server associates the identity of the mobile terminal with the MIN of the mobile data unit it is connected to. To establish a data connection between the land-based terminal and the mobile terminal, the server sends a location request to the HLR associated with the data unit, reading on the claimed “assigning the MDN and transmitting the serial number, together with the assigned MDN, to an entity other than the wireless service provider for configuring the MCN for operation with the assigned MDN,” (column 4 lines 12-15 and 19-23).

Consider claim 11, Howe clearly shows and discloses a system for optimizing the routing of a call originated from a land-based terminal to a wireless mobile terminal, reading on the claimed “wireless mobile communication device,” utilizing the interaction between a server controlled Internet protocol network and the HLR of the mobile terminal. In response to a call request by the server, the HLR identifies the VLR in contact with the mobile terminal and obtains a TLDN of the local serving switch in contact with a mobile data unit connected to the mobile terminal. The server uses the TLDN to reach a data unit on the network, which is used to place a local call over the PSTN to the serving switch, reading on the claimed, “apparatus for assigning a mobile dialing number (MDN) to a wireless mobile communication device (MCD) for providing local call access to the MCD from a base address for the MCD,” (abstract), the apparatus comprising: the HLR searching its the internal database to determine the VLR last in contact with the mobile terminal, reading on the claimed “means for selecting a wireless rate center encompassing the base address and having an MDN providing local call access to the MCD from the base address for the MCD,” (column 3 lines 37-39); and the HLR sending a routing request to the VLR, and the VLR determining that a call is deliverable and allocating a TLDN from a pool of numbers whose geographic base is the serving switch in communication with the mobile terminal, reading on the claimed “means for assigning the MDN providing local calling access to the MCD from the base address for the MCD, in the selected wireless rate center encompassing the base address, to the MCD,” (column 4 lines 28-33).

Consider claim 12, and as applied to claim 11 above, Howe further discloses the HLR searches its internal database for the VLR in contact with the mobile terminal, which then identifies the switch in communication with the mobile terminal that will connect the incoming call to the data unit associated with the mobile terminal, reading on the claimed “database defining geographic boundaries of a plurality of wireless rate centers, and means for selecting the wireless rate center of claim 11 from the database,” (column 3 lines 37-39, column 4 lines 29-33, 65-67). The VLR, reading on the claimed “wireless rate center,” stored in the database determines the serving switch which is the geographic location of the mobile terminal.

Consider claim 13, and as applied to claim 12 above, Howe further discloses that the network server chooses an appropriate data unit from the pool that is local to the physical location of the mobile terminal, by using the NPA-NXX number format of the TLDN and comparing it with the phone number connection between the data unit and its connection to the PSTN/IXC, reading on the claimed “means for converting the base address to a geographic location and selecting the wireless rate center from those wireless rate centers in the database having geographic boundaries encompassing the geographic location of the base address,” (column 4 lines 52-57).

Consider claim 14, and as applied to claim 11 above, Howe further discloses the HLR searches its internal database to determine the VLR last in contact with the mobile terminal, reading on the claimed “means for selecting the wireless rate center prior to contacting a wireless service provider,” (column 3 lines 37-39). The HLR contacts the VLR and asks for the identity of the serving switch last in contact with the mobile terminal, reading on the claimed “means for transmitting a designation of the selected wireless rate center to a wireless service provider for assignment of the MDN by the wireless service provider,” (column 3 lines 39-41). The HLR selects the VLR before contacting the VLR which functions as the current “service provider” of the mobile terminal.

Consider claim 15, and as applied to claim 11 above, Howe further discloses that the VLR allocates a TLDN from a pool of numbers whose geographic base is the serving switch in communication with the mobile terminal. The TLDN is returned to the HLR that forwards it to the network server, reading on the claimed “means for assigning the MDN and transmitting the assigned MDN to an entity other than the wireless service provider for configuring the MCD for operation with the assigned MDN,” (column 4 lines 30-35).

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Howe (US 6,876,855 B1) in view of Gallant et al. (US 5,802,468).

Consider claim 6, and as applied to claim 5, Howe clearly shows and discloses the claimed invention except that the geographic locations of the data units, HLR, VLR or mobile terminal are not disclosed in terms of latitude and longitude.

In the same field of endeavor, Gallant et al. clearly show and disclose a method for providing different levels of mobile communication service within a communication system service area. A first level of service is provided to a mobile station when it is inside the home calling area, reading on the claimed "local call access." A plurality of base transceiver stations (BTSs), each having a cellular service area for communication with a mobile station, are coupled to a common database that has a memory for storing data related to a home geographical location associated with a mobile station, reading on the claimed "MCD," (abstract). A home calling area is a geographical region that can be described in units of distance around a subscriber's home geographical location, reading on the claimed "geographic location of a base address." A local calling area covers an area larger than a home calling area which could be a predetermined geographic area having city or county lines as boundaries, reading on the claimed "geographic boundaries of the wireless rate centers," (column 7 lines 14-25). Each BTS sends out a broadcast message that includes grid coordinate information such as identifier fields defining the geographical location of the BTS, for example, the latitude and longitude location of the BTS, reading on the claimed "defining the geographic boundaries of the wireless rate centers, and the geographic location of the base address in terms of latitude and longitude," (column 10 lines 12-15).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the latitude and longitude coordinates as taught by Gallant et al. in the system of Howe, in order to locate the switches and VLRs to make a local call from a land-based terminal to a wireless mobile terminal.

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617